

Appln. No. 10/701,865
Filed: November 5, 2003
Reply to Office action mailed August 17, 2010
Amendment filed November 17, 2010

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all previous versions, and listings, of claims in the Application.

Listing of Claims:

Claims 1-21 (Canceled).

22. (Previously presented) A system for processing voice for communication over a network, the system comprising:

a processing circuit for managing the packetization of digital voice data representative of analog voice signals to provide digital voice data packets and for managing the depacketization of digital voice data, the processing circuit packetizing the digital voice data according to a packet protocol, wherein a packet is a unit of information transmitted as a whole from one device to another over the network;

a transceiver circuit for wireless transmission and wireless reception according to a wireless communication protocol of the digital voice data packets, wherein the digital voice data packets comprise destination information used for routing the digital voice data packets; and

a database having at least one entry comprising user defined call routing information and at least one associated destination address, the database for use in voice call routing to cause delivery of voice to a called party by a user selected one of a circuit switched network and a packet-based network according to a destination address of the called party and the database.

23. (Previously presented) A system as recited in claim 22 wherein the packet protocol comprises an internet protocol.

24. (Previously presented) A system as recited in claim 23 wherein the internet protocol is TCP/IP.

25. (Previously presented) A system as recited in claim 22 wherein the wireless transmission and reception of digital voice data packets is in accordance with a spread spectrum frequency hopping communication protocol.

26. (Previously presented) A system as recited in claim 22 wherein the wireless transmission and reception of digital voice data packets is in accordance with a direct sequence spread spectrum communication protocol.

27. (Previously presented) A system as recited in claim 22 wherein the wireless transmission and reception of digital voice data packets utilizes a communication protocol with a plurality of data rates including at least a standard data rate and a higher data rate.

28. (Previously presented) A system for processing voice for communication over a network, the system comprising:

conversion circuitry for converting analog voice signals to digital voice data and for converting digital voice data to analog voice signals for the reproduction of voice;

a processing circuit for managing the packetization of digital voice data to provide digital voice data packets and for managing the depacketization of digital voice data, the processing circuit packetizing the digital voice data according to a packet protocol, wherein a packet is a unit of information transmitted as a whole from one device to another over the network;

a transceiver circuit for wireless transmission and wireless reception according to a wireless communication protocol of the digital voice data packets, wherein the digital

voice data packets comprise destination information used for routing the digital voice data packets; and

a database having at least one entry comprising user defined call routing information and at least one associated destination address, the database for use in voice call routing to cause delivery of voice to a called party by a user selected one of a circuit switched network and a packet-based network according to a destination address of the called party and the database.

29. (Previously presented) A method for operating a communication device for processing voice for a communication network, the method comprising:

packetizing, by the communication device, digital voice data representing analog voice signals according to a packet protocol, wherein a packet is a unit of information transmitted as a whole from one device to another over the communication network, and wherein the digital voice data packets comprise destination information used for routing the digital voice data packets through the communication network;

comparing, by the communication device, a destination address to a database having at least one entry comprising user defined call routing information and at least one associated destination address, the database for use in voice call routing to cause delivery of voice to a called party by a user selected one of a circuit switched network and a packet-based network according to a destination address of the called party and the database; and

wirelessly transmitting, by the communication device in accordance with a wireless communication protocol, the digital voice data packetized according to a packet protocol.

30. (Previously presented) A method as recited in claim 29 wherein the packet protocol comprises an internet protocol.

31. (Previously presented) A method as recited in claim 30 wherein the internet protocol is TCP/IP.

32. (Previously presented) A method as recited in claim 29 further comprising converting analog voice signals to digital voice data.

33. (Previously presented) A method as recited in claim 29 wherein the wireless communication protocol is a spread spectrum frequency hopping communication protocol.

34. (Previously presented) A method as recited in claim 29 wherein the wireless communication protocol is a direct sequence spread spectrum communication protocol.

35. (Previously presented) A method as recited in claim 29 wherein the wireless communication protocol accommodates a plurality of data rates.

36. (Previously presented) A method for operating a communication device for processing voice for a communication network, the method comprising:

packetizing, by the communication device, digital voice data according to a packet protocol, wherein a packet is a unit of information transmitted as a whole from one device to another over the communication network, and wherein the digital voice data is packetized according to a packet protocol comprising destination information used for routing the digital voice data packetized according to the packet protocol through the communication network;

comparing, by the communication device, a destination address to a database having at least one entry comprising user defined call routing information and at least one associated destination address;

the communication device causing delivery of voice to a called party by a user selected one of a circuit switched network and a packet-based network according to a destination address of the called party and the database;

wirelessly transmitting, by the communication device in accordance with a wireless communication protocol, the digital voice data packetized according to a packet protocol;

wirelessly receiving, by the communication device in accordance with the wireless communication protocol, digital voice data packetized according to a packet protocol;

the communication device depacketizing the digital voice data; and
converting the digital voice data to analog voice signals.

37. (Previously presented) A method as recited in claim 36 wherein the packet protocol comprises an internet protocol.

38. (Previously presented) A method as recited in claim 37 wherein the internet protocol is TCP/IP.

39. (Previously presented) A method as recited in claim 36 further comprising converting analog voice signals to digital voice data.

40. (Previously presented) A method as recited in claim 36 wherein the wireless communication protocol is a spread spectrum frequency hopping communication protocol.

41. (Previously presented) A method as recited in claim 36 wherein the wireless communication protocol is a direct sequence spread spectrum.

42. (Previously presented) A method as recited in claim 36 wherein the wireless communication protocol accommodates a plurality of data rates.

43. (Previously presented) A system for processing voice for communication over a network, the system comprising:

a processing circuit for managing the packetization of digital voice data to provide digital voice data packets and for managing the depacketization of digital voice data packets, the processing circuit packetizing the digital voice data according to a packet protocol, wherein a packet is a unit of information transmitted as a whole from one device to another over the communication network, and wherein the digital voice data packets comprise destination information used for routing the digital voice data packets through the network;

a database having at least one entry comprising user defined call routing information and at least one associated destination address, the database for use in voice call routing to cause delivery of voice to a called party by a user selected one of a circuit switched network and a packet-based network according to a destination address of the called party and the database;

a transceiver for wireless transmission and wireless reception of the digital voice data packets; and

a media access controller for controlling the operations of the transceiver to transmit and receive information according to a wireless communication protocol.

44. (Previously presented) A system as recited in claim 43 wherein the packet protocol comprises an internet protocol.

45. (Previously presented) A system as recited in claim 44 wherein the internet protocol is TCP/IP.

46. (Previously presented) A system as recited in claim 43 further comprising conversion circuitry for converting analog voice signals to digital voice data and for converting digital voice data to analog voice signals for the reproduction of voice.

47. (Previously presented) A system for processing voice for communication over a network, the system comprising:

a processing circuit for managing the packetization of digital voice data to provide digital voice data packets and for managing the depacketization of digital voice data, wherein the digital voice packets comprise destination information used for routing the digital voice packets through the network, the processing circuit packetizing the digital voice data according to a packet protocol, wherein a packet is a unit of information transmitted as a whole from one device to another over the network;

a database having at least one entry comprising user defined call routing information and at least one associated destination address, the database for use in voice call routing to cause delivery of voice to a called party by a user selected one of a circuit switched network and a packet-based network according to a destination address of the called party and the database; and

a radio operating in accordance with a communication protocol for transmitting and receiving digital voice data packets.

48. (Previously presented) A system as recited in claim 47 wherein the packet protocol comprises an internet protocol.

49. (Previously presented) A system as recited in claim 48 wherein the internet protocol is TCP/IP.

50. (Previously presented) A system as recited in claim 47 further comprising conversion circuitry for converting analog voice signals to digital voice data and for converting digital voice data to analog voice signals for the reproduction of voice.

51. (Previously presented) A system for processing voice for communication over a network, the system comprising:

a processing circuit for managing the packetization of digital voice data to provide digital voice data packets and for managing the depacketization of digital voice data, wherein the digital voice packets comprise destination information used for routing the digital voice packets through the network, the processing circuit packetizing the digital voice data according to a packet protocol, wherein a packet is a unit of information transmitted as a whole from one device to another over the communication network;

a database having at least one entry comprising user defined call routing information and at least one associated destination address, the database for use in voice call routing to cause delivery of voice to a called party by a user selected one of a circuit switched network and a packet-based network according to a destination address of the called party and the database;

a radio for wireless transmission and reception of digital voice data packets; and

a processor for controlling the operation of the radio according to a communication protocol that accommodates a plurality of data rates including at least a standard data rate and a higher data rate.

52. (Previously presented) A system as recited in claim 51 wherein the packet protocol comprises an internet protocol.

53. (Previously presented) A system as recited in claim 52 wherein the internet protocol is TCP/IP.

54. (Previously presented) A system as recited in claim 51 further comprising conversion circuitry for converting analog voice signals to digital voice data and for converting digital voice data to analog voice signals for the reproduction of voice.

55. (Previously presented) A system as recited in claim 47 wherein the radio comprises a 2.4GHz radio.

56. (Previously presented) A system as recited in claim 55 wherein the radio operates in accordance with a frequency hopping communication protocol.

57. (Previously presented) A system as recited in claim 47 wherein the radio operates in accordance with a frequency hopping communication protocol.

58. (Previously presented) A system as recited in claim 47 wherein the radio operates in accordance with a spread spectrum communication protocol.

59. (Previously presented) A system as recited in claim 58 wherein the radio operates in accordance with a frequency hopping communication protocol.

60. (Previously presented) One or more circuits for use in a handheld communication device supporting the exchange of voice over a communication network, the one or more circuits comprising:

at least one interface to circuitry for transmitting and receiving over a radio frequency channel, packets comprising packetized digital voice data according to a packet protocol, wherein a packet is a unit of information transmitted as a whole from one device to another over the communication network; and

at least one processor operably coupled to the at least one interface, the at least one processor operating to, at least,

convert analog voice signals at a first user location to first digital voice data;

packetize the first digital voice data according to the packet protocol to produce first digital voice data packets, wherein the first digital voice data packets comprise destination information used for routing the first digital voice data packets through the communication network to a second user, and wherein the first digital voice data is not packetized for transmission when representative of audio signals below a predetermined threshold level;

compare a destination address to a database having at least one entry comprising user defined call routing information and at least one associated destination address;

cause delivery of voice to a called party by a user selected one of a circuit switched network and a packet-based network according to a destination address of the called party and the database;

wirelessly transmit, in accordance with a wireless communication protocol, the first digital voice data packets;

wirelessly receive, in accordance with the wireless communication protocol, second digital voice data packets;

depacketize the second digital voice data packets to produce second digital voice data; and

convert the second digital voice data to analog voice signals at the location of the first user.

61. (Previously presented) The one or more circuits of claim 60 wherein the packet protocol comprises an Internet protocol (IP).

62. (Previously presented) The one or more circuits of claim 61 wherein the Internet protocol is the transmission control protocol (TCP)/Internet protocol (IP) protocol.

63. (Previously presented) The one or more circuits of claim 60 wherein the at least one processor queues received second digital voice data, and delays conversion of queued second digital voice data for an adjustable period of time.

64. (Previously presented) The one or more circuits of claim 63 wherein the at least one processor adjusts the period of time based upon a network propagation delay.

65. (Previously presented) The one or more circuits of claim 63 wherein the at least one processor determines the adjustable period of time using a packet sent to the handheld communication device in response to a packet sent by the handheld communication device.

66. (Previously presented) The one or more circuits of claim 65 wherein the packet sent by the communication device is a test packet.

67. (Previously presented) The one or more circuits of claim 60 wherein the wireless communication employs a frequency of approximately 2.4 gigahertz.

68. (Previously presented) The one or more circuits of claim 60 wherein the handheld communication device employs a frequency hopping spread spectrum technique.

69. (Previously presented) The one or more circuits of claim 60 wherein the handheld communication device employs a direct sequence spread spectrum technique.

70. (Previously presented) The one or more circuits of claim 60 wherein the at least one processor further operates to cause routing of digital voice data packets over a wired network.

71. (Previously presented) The one or more circuits of claim 70 wherein the routing of a call is selected by the first user.

72. (Previously presented) The one or more circuits of claim 70 wherein the wired network is a packet network.

73. (Previously presented) The one or more circuits of claim 70 wherein the wired network is a public switched telephone network.

74. (Previously presented) The system of claim 22, wherein a user is prompted to select delivery of voice to the called party by one of the circuit switched network and the packet-based network, if such prompting is indicated by a user defined parameter.

75. (Previously presented) The system of claim 28, wherein a user is prompted to select delivery of voice to the called party by one of the circuit switched network and the packet-based network, if such prompting is indicated by a user defined parameter.

76. (Previously presented) The method of claim 29, comprising prompting a user to select delivery of voice to the called party by one of the circuit switched network and the packet-based network, if such prompting is indicated by a user defined parameter.

77. (Previously presented) The method of claim 36, comprising prompting a user to select delivery of voice to the called party by one of the circuit switched network

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and the packet-based network, if such prompting is indicated by a user defined parameter.

78. (Previously presented) The system of claim 43, wherein a user is prompted to select delivery of voice to the called party by one of the circuit switched network and the packet-based network, if such prompting is indicated by a user defined parameter.

79. (Previously presented) The system of claim 47, wherein a user is prompted to select delivery of voice to the called party by one of the circuit switched network and the packet-based network, if such prompting is indicated by a user defined parameter.

80. (Previously presented) The system of claim 51, wherein a user is prompted to select delivery of voice to the called party by one of the circuit switched network and the packet-based network, if such prompting is indicated by a user defined parameter.

81. (Previously presented) The one or more circuits of claim 60, the at least one processor operating to, at least:

prompt a user to select delivery of voice to the called party by one of the circuit switched network and the packet-based network, if such prompting is indicated by a user defined parameter.